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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,622	06/20/2006	Hidetoshi Konno	034185-072	2627

21839 7590 11/18/2008

BUCHANAN, INGERSOLL & ROONEY PC
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER	
MULLER, BRYAN R	

ART UNIT	PAPER NUMBER
3727	

NOTIFICATION DATE	DELIVERY MODE
11/18/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No.	Applicant(s)	
	10/549,622	KONNO ET AL.	
	Examiner	Art Unit	
	BRYAN R. MULLER	3727	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 August 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 objected to because of the following informalities: The claim makes reference in several instances to the position or structure of parts of the apparatus relative to a portion of the carton, such as the paper powder removing nozzle being positioned so that a space exists between the nozzle outer wall and an inner wall of one of the cartons. However, the relative position of the apparatus and each feature of the apparatus are only **intended** to be positioned within the carton and the limitation "during operation of the machine" does not provide any further structure because the claim is an apparatus claim and the operation of the machine is not defined in any way, and several of the features are further described in the claims as being movable relative to the carton. Therefore, it is suggested that the applicant replace any reference to the carton or the space formed between the nozzle and the carton when defining relative position of features in the claim with descriptions of the position of the features relative *only* to other feature of the apparatus itself. For the sake of the current Office Action, the Examiner will treat the claim, as best understood, to disclose that the paper powder collecting mechanism is installed above a portion of the nozzle outer wall and facing a portion of the nozzle outer wall.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation that the static electricity removing mechanism is inside the paper powder removing nozzle is not supported by the original application. The specification and claims fail to disclose that the static electricity removing mechanism is inside the paper powder removing nozzle and the drawings in Fig. 1 only show the static electricity removing mechanism (11) as a dashed line, which is near the air jetting port, but **does not** show nearly enough detail to support that the static electricity removing mechanism is inside the paper powder removing nozzle. For the sake of the current Office Action, the Examiner will assume that the claim is intending to claim that the static electricity removing mechanism is near the jetting port and *near* the paper powder removing nozzle.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima (JP 03-069423) in view of Moriyama (JP 2003-095226).

6. In reference to claim 1, Kojima discloses a carton paper powder removing apparatus comprising a paper powder removing nozzle (42) that is adapted to reciprocate into and out of a carton and has a jetting port (42a) at a tip thereof, the nozzle possessing a nozzle outer wall, and the outer wall being positioned, when located inside a carton (as seen in Fig. 6) so that a space exists between the nozzle outer wall and an inner wall of the carton (5) and a paper powder collecting mechanism (41) having suction ports (air suction port formed by the collection mechanism 41 may be considered to be separated into at least two port sections that are positioned on opposing sides of the nozzle), which are disposed above and facing the jetting port and a portion of the outer wall of the paper powder removing nozzle (and the space), whereby the paper powder in the carton can be removed. However, Kojima fails to disclose a paper powder return prevention means between the tip part of the paper powder removing nozzle and a base part of the paper powder removing nozzle for preventing return of paper powder to the carton. Moriyama discloses a similar apparatus for clearing paper powder from cartons and Moriyama teaches that a paper powder collecting means (suction tube 33) may have a flared distal end, which will provide a larger suction area for the paper powder collecting means to collect more paper powder that is loosened from the inner walls of the carton by the powder removing nozzle (32) and will prevent any paper powder from passing into higher areas

of the carton or spreading paper powder to previously cleaned areas of the carton. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a flared distal end to the paper powder collecting mechanism (41) of Kojima, as taught by Moriyama, to enlarge the area of the suction opening in the paper powder collecting mechanism to allow the paper powder collecting means to collect more paper powder that is loosened from the inner walls of the carton by the paper powder removing nozzle (42) and will prevent any paper powder from passing into higher areas of the carton or spreading paper powder to previously cleaned areas of the carton. Thus, the flared section of the paper powder collecting mechanism will have an equivalent structure as the applicant's claimed paper powder return prevention means and would obviously, not only prevent paper powder from escaping above the paper powder collecting mechanism but would also prevent any paper powder that is outside the carton or above the paper powder collecting mechanism from returning to the carton.

7. In reference to claim 5, Moriyama further discloses that a static electricity removing mechanism (34, 37) may be positioned near the air jetting port and paper powder removing nozzle to remove the static electricity from any paper powder particles and from the cartons to make it easier for the paper powder particles to be removed from the cartons. Therefore, it further would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the apparatus of Kojima with a similar static electricity removing mechanism near the air jetting port and paper powder removing nozzle, as taught by Moriyama, to remove the static electricity from any paper

powder particles and from the cartons to make it easier for the paper powder particles to be removed from the cartons.

8. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima (JP 03-069423) in view of Moriyama (JP 2003-095226) as applied to claim 1 and further in view of Herzog (5,487,200).

9. In reference to claims 2 and 3, Kojima discloses that air is moved through the paper powder removing nozzle, into the paper powder collecting mechanism but fails to disclose how the air is moved through the apparatus. Moriyama further discloses a blower (36) for collecting a paper powder removing carrying medium (air) and sending the medium to the paper powder removing nozzle. Thus, it further would have been obvious to one of ordinary skill in the art that Kojima would need some form of blower, as taught by Moriyama, for collecting a paper powder removing carrying medium (air) and sending the medium to the paper powder removing nozzle. However, Kojima and Moriyama fail to specifically disclose a filter for removing the paper powder from the carrying medium. Herzog discloses a similar apparatus for cleaning containers wherein a blower (18) is provided to suction the carrying medium (also air) from a collecting mechanism to the blower and Herzog teaches that the blower further comprises a filter to remove any particles of dust or dirt that was suctioned out of the container by the collecting mechanism from the carrying medium. Further, it would have been obvious to one of ordinary skill in the art that the apparatuses of Kojima and Moriyama would desirably have some mechanism to remove the paper powder from the carrying medium

before returning the medium to the carton being cleaned through the nozzle to more effectively remove all of the paper powder without adding additional paper powder via the nozzle. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the apparatus of Kojima with a filter, as taught by Herzog, somewhere along the flow path between the collecting mechanism and the blower to remove the paper powder from the carrying medium before returning the carrying medium to the carton through the nozzle to prevent the apparatus from providing additional paper powder to the carton that is being cleaned.

10. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima (JP 03-069423) in view of Moriyama (JP 2003-095226) and Herzog (5,487,200) as applied to claims 2 and 3 and further in view of Imamura (5,819,367) and Kobayashi et al. (5,284,522).

11. In reference to claims 4 and 6, Kojima and Moriyama disclose the apparatus as discussed supra, and Kojima further discloses a reciprocating movement drive mechanism (44/45), but neither Kojima nor Moriyama disclose a counter for measuring concentration of removed paper powder in the carrying medium. Imamura and Kobayashi both disclose vacuum cleaners having control mechanisms that determine when cleaning is finished on a surface being cleaned to ensure that each surface is completely cleaned before removing suction from the surface or stopping the suction fan that provides the suction. Both Imamura and Kobayashi disclose sensors (or counters) that are positioned within the flow path from a collection mechanism to

suctions dirt or debris from the surface being cleaned, which detect quantities of dust and determines whether or not cleaning is finished (Col. 1, lines 11-23 of Imamura). Kobayashi further discloses that the dust sensor (or counter) may convey information to a controller, which controls an electric fan (blower) based on the output of the dust sensor and cleaning condition detecting means. Further, it would have been obvious to one of ordinary skill in the art to provide the apparatus of Kojima with a mechanism to determine that each carton is thoroughly cleaned before removing the nozzle and collecting means therefrom to ensure that all of the paper powder is effectively removed from every carton. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the apparatus of Kojima with a similar dust sensor, which would effectively act as a paper powder counter, to measure the amount of debris in the carrying medium being removed from each carton (concentration of removed paper powder) and to provide the information to a controller that will control the function of the blower fan to ensure that suction is applied to the carton until the carton is completely clean inside. It further would have been obvious that the paper powder sensor would be positioned somewhere along the flow path that the paper powder is still present, which must be between the collecting mechanism and the filter. Additionally, it would have been obvious to one of ordinary skill in the art to automate the operation of the machine by also providing the controller with the ability to send a control signal to the reciprocating movement drive mechanism to control the movement of the nozzle and collection mechanism in and out of each carton.

Response to Arguments

12. Applicant's arguments filed 8/18/2008 have been fully considered but they are not persuasive. Although the rejections have been changed to make Kojima the base reference in place of Moriyama, as necessitated by the applicant's amendments to the claims, some of the applicant's arguments still apply to the rejection. However, the applicant's arguments are not considered to be persuasive. The applicant's first argument regarding the failure of the prior art to teach a supply line with a flared end (lines 5-9 on page 9 of the Remarks filed 8/18/2008) is moot, because the above rejection provides a suction line (paper powder collecting mechanism) with a flared opening. The applicant has argued that the outwardly flared portion of Moriyama is used to direct the flow from a supply line. However, this is merely an assumed function, provided by the applicant wherein the flared suction tube will also provide a larger suction area to collect a greater amount of paper powder, as discussed in the rejections, which will provide motivation to provide a similar flared suction tube to Kojima, as discussed supra. Finally, the applicant argues that neither Kojima nor Moriyama disclose that the flared opening would function as a paper powder return prevention means. However, the flared opening taught by Moriyama does have a similar structure as the applicant's disclosed paper powder return prevention means and would inherently prevent at least some paper powder from returning to the carton. Thus, the structure disclosed by Kojima and Moriyama does provide similar structure and function as the applicant's claimed paper powder return prevention means.

13. The applicant also requests that the Examiner provide English language translations for the Moriyama and Kojima references if the Examiner continues to rely on these references to reject the claims. However, the Examiner feels that the foreign references, including the drawings and abstract translations provide sufficient structure and function to properly rely on for a rejection. If the applicant feels that a full English language translation of either reference may clarify the rejections or arguments, the applicant is free to acquire and provide such translations.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamazaki discloses an apparatus having similar structure and function as the applicant's claimed invention.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. The amendments to lines 11-14 of claim 1, which clarify that the paper powder return prevention means is located between a tip of the nozzle and a bas part of the nozzle necessitates the new grounds of rejection (making Kojima the primary reference and Moriyama the secondary teaching reference). Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN R. MULLER whose telephone number is (571)272-4489. The examiner can normally be reached on Monday thru Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica S. Carter can be reached on (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bryan R Muller/
Examiner, Art Unit 3727
11/13/2008